and, in fact, furthers the goals of the CWA. The preamble to the September 26, 1984, NPDES rulemaking explained EPA's rationale for the "constant treatment" requirement:

> EPA's effluent limitations guidelines and standards-setting process are predicted [sic] upon the efficient operation and maintenance of removal systems. A number of the effluent limitations guidelines and standards upon which NPDES permits are based do not contain specific limitations for all of the pollutants of concern for the given industry.
> * * * * *
> The data available to EPA show that effective control of these [unregulated] pollutants can be obtained by controlling the discharge of the pollutants regulated by the standard . . . to levels achievable by the model treatment technology upon which the effluent guideline limits are based.
> * * * * *
> If bypass of treatment equipment is allowed, there is no assurance that these unlimited pollutants will be controlled, even though those specifically limited still meet permit limitations.

(49 FR 38036–38037.)

Like the effluent guidelines in the NPDES program, the national categorical pretreatment standards do not necessarily regulate all pollutants of concern in a particular industry, but instead rely on the technology required to control the specifically regulated pollutants to also regulate other pollutants of concern, assuming proper operation and maintenance of the treatment facilities. For example, control of oil and grease by a pretreatment system will also serve to control some toxic components of a discharge and some portion of the BOD loading of that discharge. The bypass prohibition thus supplements the categorical standards and furthers the Act's goals of eliminating the discharge of pollutants.

Like the upset provision, the bypass regulation is a general requirement which, although it works in conjunction with the categorical pretreatment standards, is not itself an effluent standard. The CWA clearly authorizes the Administrator to promulgate regulations which are necessary to carry out the purposes of the Act (Section 301). EPA has not "circumvented" the standard setting procedures established by the Act in promulgating the bypass provision, because it was not limited to establishing categorical standards in developing regulations to implement the national pretreatment program. The Agency has determined that the bypass provision, which mandates full use of treatment facilities and encourages proper operation and maintenance of those facilities is a reasonable measure to ensure compliance with pretreatment standards.

Likewise, nothing in the Act requires the Agency to justify each of its program regulations with a cost benefit analysis as the commenters suggest. Of course, the Agency does not ignore these factors. In this case, however, because the bypass provision merely "piggybacks" existing requirements, it does not itself impose costs that have not already been taken into account in the development of categorical standards. In addition to capital costs, these costs include the costs of operating and maintaining pretreatment facilities. (*See*, for example, "Development Document for the Electroplating Category".) Moreover, the Agency decided to adopt the approach of controlling some pollutants of concern through controlling "indicator" pollutants in part to reduce compliance costs (e.g., sampling, monitoring, and reporting of each pollutant specifically limited by the standards) in response to industry concerns. On the other hand, the incidental removal of pollutants not specifically regulated clearly conforms to the environmental benefits envisioned by Congress of eventually eliminating the discharge of all pollutants.

The bypass provision does not dictate how users must comply because it does not dictate what pretreatment technology the user must install. Instead the bypass provision merely requires that the user operate the technology it has chosen. Although termed the "constant treatment" requirement, the bypass provision does not mean that the pretreatment facilities must operate twenty-four hours a day regardless of the activities at the user's facility. Instead, the user must operate the treatment system in a manner consistent with appropriate engineering practice. Thus, if the facility is designed to use scrubbers twice a day, the bypass regulation does not require the facility to run the scrubber 24 hours a day. Similarly, the bypass prohibition does not require operation of the treatment system if the facility is not operating and there are no wastewater discharges. Nor does it require operation of treatment systems 24-hours a day if wastes are collected and retained for eventual treatment and released in batch discharges. For users who must operate continuously, the bypass prohibition recognizes that bypass may be unavoidable and therefore allows bypass for essential maintenance that cannot be conducted during normal downtimes.

In sum, EPA has considered all of the comments objecting to a bypass prohibition when pretreatment standards would not be violated because of the bypass. These commen mirror comments the Agency co and rejected during considerat NPDES bypass regulation. Noth the comments convince the Agency th its decision should be different becaus of material differences between NPDE permittees and industrial users. As wi the NPDES bypass provision, EPA has determined that a bypass provision in the General Pretreatment Regulations necessary to ensure that users properl operate and maintain their treatment facilities and thus fulfill the purpose a assumptions underlying technology-based standards. This is consistent wi Congressional intent and within its authority to promulgate regulations necessary to achieve the purposes of t Act.

d. *Today's rule.* For the reasons stat in the preamble and in the response to comments above, EPA is promulgating the bypass regulation as proposed.

III. Judicial Review of Provisions Not Amended

In the regulatory section of this noti EPA has, for the sake of clarity, sometimes reprinted portions of regulatory text that have not been amended by today's proposal. Those portions of the June 26, 1978 regulation and the January 28, 1981 regulat amendments that are not subst amended in today's Federal Reg were only subject to judicial review in those petitions for review that were fi within 90 days of the date of issuance the June 26, 1978 regulations, and the January 28, 1981 amendments thereto, respectively.

IV. Technical Revisions

In addition to the substantive chang made by today's rulemaking, certain sections of the General Pretreatment Regulations must be revised in order t conform to today's changes. Thus, the reference to "contract(s)" is deleted from §§ 403.8(f)(1)(iii) and 403.9(b). Th reference in new § 403.12(n) (*Provisio governing fraud and false statements*) the reports required by old paragraph (b), (d), (e), and (h) of that section has been changed to the reports required new paragraphs (b), (d), (e), (h), and (i and (k) of that section. Similarly, new § 403.12(o) has been revised to includ as subject to the record-keeping requirements of that paragraph any reports required pursuant to new paragraph (h) of that section. In addition, the references in § 403.10(d) § 403.12(h) have been revised to re the redesignation of that paragrap § 403.12(k).

dependable pretreatment systems. On the contrary, the rule prohibits bypass except under very limited circumstances and in no case would excuse bypass where the user failed to properly operate and maintain its treatment system. Even when a violation of pretreatment standards would not result, the rule prohibits bypass unless the bypass was for essential maintenance to assure efficient operation. "Maintenance" in this instance does not refer to maintenance of the user's general facility, but means maintenance essential to the efficient operation of the user's pretreatment system. Moreover, the maintenance must be essential, of an emergency nature, not routine or based on economic considerations alone. Generally, this means repairs and maintenance that cannot wait until the production process is not in operation. For example, if the seal on a valve malfunctions or a pipe bursts during production hours at an industrial facility, and the facility operator bypasses that particular unit process in the pretreatment system in order to perform corrective maintenance, such maintenance would be considered essential. (A more complete discussion of "essential maintenance" appears at 49 FR 38037, September 26, 1984.) Recognizing the need for essential maintenance should encourage, not discourage, dependable pretreatment systems.

The rule does not excuse bypass in certain situations where pretreatment standards are violated. Significantly, bypass would not be excused if there were feasible alternatives to the bypass such as the use of auxiliary equipment. The rule specifically states that the "no feasible alternatives" test is not met if "adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance." (§ 403.17(1)(ii).) Thus, to the extent reasonable engineering judgment would dictate use of dual equipment or "slop" tanks so that bypass would not occur during routine maintenance, EPA agrees with the commenter that these back-up facilities should be required. However, EPA cannot agree that the rule should require an industrial user to have certain back-up equipment in all cases.

In contrast to these comments, another POTW suggested that back-up equipment should not be required where the system has already been built and adding back-up equipment is not feasible, for example where the user does not have enough land to install the additional equipment. In lieu of back-up equipment, users should be required to keep an adequate spare parts inventory on hand. As noted above, the regulation does not mandate back-up equipment in all cases, but includes a flexible requirement based on "reasonable engineering judgment." Thus, whether installation of back-up equipment or keeping a spare parts inventory is sufficient for purposes of the no feasible alternative test depends on whether, in the exercise of reasonable engineering judgment, one or the other should have been present to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance.

Because of the flexibility built into the bypass provision, EPA also does not agree with the commenter who suggested that EPA should allow bypass in all cases of floods. This commenter reasoned that although floods may jeopardize or damage operation of the system, they don't often cause "severe property damage." The commenter expressed particular concern about hurricane/monsoon rains that exceed the industrial users capacity to contain and treat storm water runoff. In such cases, the commenter argued, bypass during floods could reduce or prevent environmental harm by eliminating the "flushing out" of contaminants in the treatment system.

EPA is aware that flood situations may present users with a difficult dilemma concerning whether or not to bypass. The underlying premise of the CWA, however, is that undertreated or untreated wastewater should not be discharged. Only very exceptional circumstances should justify the intentional diversion of a wastestream from required treatment processes. In effect, the "severe property damage" test of the bypass provision reflects the Agency's determination of when the harm of not bypassing (e.g., when it avoids causing the treatment system from becoming inoperable or prevents substantial and permanent damage to natural resources) exceeds the benefits of requiring treatment in any event and thus justifies excusing a bypass. Therefore, the Agency has already taken into account the factors mentioned by the commenter (damage to the treatment system, environmental harm) in a manner consistent with the CWA.

In response to the comment that the regulation should make an industrial user liable any time it causes damage at the POTW, EPA notes that the bypass provision merely allows an industrial user to avoid an enforcement action for violations of pretreatment standards. It does not provide a defense to other action a Control Authority may hav against an industrial user such as an action for damages. Also, as with the upset defense, section 510 of the CWA allows a POTW (or a State) to establish more stringent requirements, such as prohibiting bypass or requiring back-up equipment in all cases.

The remaining comments related to the prohibition against bypass even when violations of pretreatment standards would not result (the "constant treatment" requirement). One commenter suggested that the Agency reword the regulation because it seemed to require the use of pretreatment equipment even if the quality of the discharge would not be improved as a result. Another commenter stated that promulgating this provision in the pretreatment regulations would violate the NPDES settlement agreement between EPA and industry. Others asserted that the "constant treatment" requirement violates the CWA, listing three basic reasons: (1) It dictates how to comply, rather than what standard to comply with; (2) the rationale used by EPA to support the requirement (i.e., ensuring appropriate control of pollutants that are not specifically regulated) constitutes de facto regulation and circumvents the stan setting procedures contained in the and (3) by failing to compare the costs of the requirement with the environmental benefits of reducing "unregulated" pollutants, the Agency acted arbitrarily.

The Agency disagrees with all these comments. The settlement agreement between EPA and industry groups required EPA to propose certain revisions to the NPDES bypass provision, but did not, and could not, require EPA to agree to promulgate those proposed revisions in the final rule. EPA's decision not to promulgate the proposed revisions resulted in a suit against EPA challenging the NPDES bypass provision. The challenge is based on the merits of the regulation and not because of any alleged breach of the settlement agreement. The Court of Appeals for the D.C. Circuit recently upheld the cited NPDES regulations on bypass (*NRDC v. EPA, et al.*, 28 ERC 1153, June 30, 1987). Therefore, this commenter's suggestions regarding the "constant treatment" requirement have not been incorporated into today's regulation. EPA's position continues to be that requiring users to operate the pretreatment facilities at all times even though bypassing these facilities would not result in violations of pretreatment standards does not violate the CW

defense to violations of national technology-based discharge limitations.

As explained in the preamble to the proposed rule, the purpose of deleting the word "specific" from § 403.16(c)(1) is to clarify that the regulation does not require a discharger to produce a level of proof that is not scientifically possible to obtain or to require investigation and demonstration of the cause of an upset to an impossible degree of certainty. For example, there may be cases where biological activity is disrupted in a treatment system, where no change in raw waste characteristics could be identified, and where a thorough investigation by the user could not identify the precise cause of the violation. Such evidence could be adduced to show the "cause" required by today's regulation, even though the precise cause eluded detection. In these cases, it is sufficient that the available evidence vindicates the industrial user although it does not specifically identify the responsible party or event.

The Agency reiterates that a demonstration of the cause of an upset can be based on evidence that would be acceptable as proof of a fact in court. Thus, demonstration of cause can be based upon circumstantial, as well as direct, evidence. In many cases, circumstantial evidence may be all that is available. However, under the final rule, it is not enough simply to show that normal operating procedures were followed at the time the categorical standards were exceeded. By implication, the final rule requires at least a thorough investigation of the causes of the upset. Further, subsequent claims of upset would require a stronger showing where previous violations had occurred and no effort, or insufficient effort, was made to identify and remedy the cause or causes.

Finally, EPA would like to clarify that the upset defense is available only for factors beyond the reasonable control of the industrial user. In arguing for extension of the upset defense to cover local limit violations, one commenter listed changes in wastewater characteristics as an instance in which a violation would be unavoidable and therefore should be excused. EPA disagrees that a change in wastewater characteristic is beyond the reasonable control of the industrial user. Indeed, the industrial user is in the best, and perhaps only, position to control the characteristics of the wastewater entering its pretreatment facilities. Therefore, EPA would not consider an upset resulting from changes in wastewater characteristics eligible for the upset defense.

d. *Today's rule.* Today's final rule is the same as the proposed rule. As proposed, the word "specific" is deleted from § 403.16(c)(1) so that in establishing an upset defense, an industrial user must identify the cause of the upset, but no longer needs to identify the specific cause of the upset as required by the previous rule. No other aspects are changed by this rulemaking.

E.5. Bypass Provision [40 CFR 403.17]

a. *Existing rule.* For direct discharges, the NPDES regulations prohibit bypass, which is defined as the intentional diversion of waste streams from any portion of a discharger's treatment facility. This provision thus requires NPDES permittees to operate their entire treatment facility at all times. There are, however, exceptions to the strict prohibition on bypass even where effluent limitations may be violated as a result. Bypass may be excused if the bypass was unavoidable to prevent loss of life, personal injury or severe property damage, and where there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. The "no feasible alternatives" criterion is not satisfied if, in the exercise of reasonable engineering judgment, the permittee should have installed adequate back-up equipment as preventative maintenance or to prevent a bypass that occurred during normal periods of equipment downtime. The prohibition of bypass in the NPDES regulations applies even where the permittee does not violate permit limitations during the bypass. However, permittees may bypass if they do not exceed effluent limitations and if the bypass was for essential maintenance to ensure efficient facility operations.

The NPDES bypass provision serves two basic purposes. First, it excuses certain unavoidable or justifiable violations of permit effluent limitations, provided the permittee can meet the bypass criteria. Second, it requires that permittees operate pollution control equipment at all times, thus obtaining maximum pollutant reductions consistent with technology-based requirements mandated by section 301 of the CWA and furthering the Act's goal of eliminating the discharge of all pollutants. Section 101(a)(1) of the Act. Without such a provision, dischargers could avoid appropriate technology-based control requirements.

b. *Proposed change.* EPA proposed to add a bypass provision to the General Pretreatment Regulations similar to that in the NPDES program. The purposes served by the NPDES bypass provision are equally important in the pretreatment context, and, therefore, prohibition against bypass should apply to industrial users discharging to POTWs. Like the NPDES provision, the proposal would require industrial users to operate their treatment systems at all times. It would also excuse bypasses under the same circumstances as does the NPDES bypass regulation.

Consistent with the NPDES regulations, the proposed regulation would also impose certain notice requirements when a bypass by an industrial user results in the violation of applicable pretreatment standards or requirements (including local limits established in accordance with § 403.5(c)). If the industrial user knows in advance of the need for a bypass, it must give prior notice to the Control Authority, if possible at least ten days before the date on which the bypass is to occur. If the bypass is not anticipated the industrial user must notify the Control Authority orally within 24 hours of becoming aware of the bypass. This 24-hour notice must be followed within five days by a written description of the bypass, its cause, its duration (or, if it has not been corrected, how long it is expected to continue), and what has been done to rectify the problem. The proposed rule would allow the Control Authority to waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

c. *Response to comments.* Several commenters supported EPA's proposed rule without reservation for the reasons stated in the preamble. Nearly all commenters expressed support for some aspects of the proposal, but had objections to various other parts. In most cases, these objections paralleled objections to the NPDES bypass provision stated in previous rulemaking and pending litigation. Only one commenter, a POTW, objected entirely to adding a bypass provision to the General Pretreatment Regulations.

The commenter who argued that EPA should not promulgate the proposed rule stated that industrial users should not be given any incentive to bypass treatment systems and should be liable without exception for any damage they cause at the POTW. Instead, the incentive should be to require them to operate dependable pretreatment systems (e.g., use of dual equipment, "slop" tanks) to avoid the need for bypass. Another POTW stated that there is "no rationale" for allowing bypass for maintenance.

Clearly, EPA's intent in proposing the bypass provision was not to disco